1: Honigmann E-5 (1943-1945) 1949 ND12 Nahane ND12

322 in the standing tree is inserted to a depth of about three inches into a space provided at the lower end of the frame. The upper end of the lumber is then forced back until it approaches the deepest section of the curve of the frame. It is now lashed to the upper end of the apparatus with rope while a second and third piece of lumber are similarly inserted and bent. When all the wood to be bent is in the apparatus, the pieces are simultaneously further bent against the curved surface of the frame, being forced as far back as possible (Pl. 6, a). To prevent the wood from splitting during this process, cleats, a quarter of an inch thick and three inches wide, are nailed across the piece of lumber, the nails extending into the bending apparatus. When the lumber has been forced back as far as possible it is firmly lashed in position and left to dry.

The wood for snowshoe frames is bent by hand. Taking the thinnest portion of the wood, which will be the front of the snowshoe, the worker puts it under his foot and gradually bends the rest of the pole upwards. A notch is cut about half an inch from the front end but no other notches or holes are cut at this time. A rope or piece of babiche is then fastened from the tip to a point further back on the wood and is pulled taut enough to retain the desired bend. When both parts of a rim have been bent they are roughly lashed together in the form of the finished snowshoe. A block of wood takes the place of the struts in keeping the rims a proper distance apart and also helps to bend the rims further. The whole shoe is then spanned with a lever (Pl. 10, a) and dried in the warmth of a cabin.

While trees are sometimes allowed to dry before being worked into lumber, in the construction of toboggans and snowshoes, lumber is dried after it has been worked and bent. Drying is generally done in a house or tent, where there is a stove, and takes from three days to a week. Although it is recognized that long term sun drying is superior to quick indoor drying, no cases were observed in which objects had been made in the spring or summer and allowed to dry outdoors until winter.

322 Woodcarving with an ordinary butcher or pocket knife is a technique used in making
442 toys, stirring spoons, trigger sticks, and other implements. Wood carving is done by men; the worker drawing the knife toward himself as he works.

● 283 Cordage. Although nails are indispensable for joining wood in constructing coffins, houses, and other large objects, line is widely employed in a variety of repairs and manufactures. The principal native lines manufactured by the people are cut from tanned and semi-tanned caribou or moosehide, or stripped from moose and caribou sinew. Line from fully tanned skin is prepared by cutting a piece of soft hide into a continuous strip up to a half inch in width. Before being used a new piece of tanned skin line is tugged between the hands to stretch it.

Semi-tanned skin line, commonly known as babiche, is cut from caribou or moosehide from which *all the hair and flesh has been cleaned and which has been soaked in water to soften.* Moosehide babiche is much stronger than that made from caribou skin. The pieces of hide selected generally consist of the four outer edges which, in order that the skin could be lashed on the tanning frame, were performed during the tanning process. Each strip is about one inches wide and the length of one of the sides of the stretched moosehide—from five to seven feet long. The strip is cut away from the semi-tanned hide and soaked in a dishpan until it is soft and pliable. To cut the strip into line, two women seat themselves

1: Honigmann E-5 (1943-1945) 1949 ND12 Nahane ND12

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on the ground facing one another, about two feet apart. One woman, holding the hide, inserts the point of a pocketknife to penetrate the material. This hole is made about fifteen inches from one end of the strip of hide (hereafter referred to as the lower end) and one quarter inch from the cut (unperforated) edge of the strip (hereafter referred to as the inner edge). The second woman now picks up the lower end of the strip and holds it taut as the first worker, still holding the hide fifteen inches from the lower end, runs the blade down through the lower end of the material. About eight quarter inch wide strips, fifteen inches long, are successively cut in this fashion. The cutter now takes hold of the strip of hide fifteen inches further up and her assistant likewise moves her grip. The first woman runs the knife from the upper end of each previous cut to the point at which she is now holding the material. The second woman holds the hide taut and separates each strand of babiche as it is cut from the rest of the skin. In this second cutting, each successive strand is cut about one half inch shorter than the previous strand. Again the cutter seizes a new hold on the rectangular strip of hide fifteen inches closer to the upper end. The same process of cutting is repeated until the upper end of the strip has been reached. Before cutting the last fifteen inch length, the cutter slits a hole at the upper end of the hide and in this slit inserts the index finger of her left hand. She holds the strip taut with this finger as she cuts, terminating the first cut about an inch below the hole. Each successive cut, except the last, continues to stop a half inch below the previous termination. The last cut goes through the upper end of the hide. Turning to the remainder of the strip of hide the cutter repeats the same process of cutting which we have just described. As the outer edge of the material with the ladung holes are approached, the cutting is done as carefully as possible. Strands may be cut more narrowly than one quarter of an inch as the cutter skirts the inner edge of one of these holes. These holes are also used as cuts, the knife continuing its operation at the upper end of each. The ragged outer edge of the hide, to which short lengths of cut moosehide still adhere, is discarded and the lengths of babiche are terminated below the upper end of the integral is reached. When a rectangle of hide has been cut in this fashion, the worker has [illegible] bundles of babiche. Each bundle has about eight strips of babiche, a quarter inch wide and about seven feet long, connected at the upper end. These bundles are hung in the open air until dry. As babiche is required, the strands are cut free from the [illegible] hide. When observed, the cutting of babiche line was done within a tent and without particular ceremonial expression. Occasional comments were exchanged regarding the progress of the work, no attention was directed toward one of the women's babies.

Before being used, babiche line is moistened. Subsequently, the line dries hard, shrinking somewhat, and thereby providing a secure lashing. Babiche finds wide employment, being used to fill moccasins, lash handlebars on a sled or toboggan, lash shafts on a sled, and for numerous repairs on cars, toboggans, dog harnesses, and elsewhere where strong line is desired and where the fastening does not have to be frequently undone.

To prepare snow line, a block of caribou or moose sinew, about one and a half inches wide, fifteen inches long and one sixteenth of an inch thick, is softened by running it through the teeth. Holding the strip in one hand, the worker runs the blunt edge of a knife blade against the surface of the sinew. This operation squeezes some of the moisture from the sinew, making it more pliable. Loose strands of sinew are grasped between the index finger and

1: Honigmann E-5 (1943-1945) 1949 ND12 Nahane ND12

283 thumb, pulled free, and set aside. When these loose strands have been exhausted, the worker using her fingernails, picks strands away from the block and then strips them free. This continues until the entire block has been separated into individual strands of line. Each of these strands is now placed on the woman's knee and twisted. This is done by moistening the flat of the fingertips with saliva and using them to rub the sinew strand toward the body of the worker. The ends of each strand are then twisted by twirling them between the moistened thumb and index finger. The strands are preserved for sewing moccasins and mittens. All line is manufactured by women. In addition to native cordage, people use manila rope, sewing thread, brass wire, and insulated copper cable for sewing and lashing.

[442]

284 The principal knots used are simple ones and include the single and double overhand, the "thicker" or running noose, the slip hitch, and the weaver's knot or short bend. The running noose is used to fasten snares, used as sinkers, to a fish net. The slip hitch is widely used when a knot is required which can readily be opened. It is employed, for example, to tie tent ropes to guy posts or to hang up bags of food. The short bend is used to secure two ends of line and is also employed to fasten a length of line to the corner of a tarp (Fig. 3, d). The split handle of an ax is sometimes bound together with lashings applied as a sailor or hammock hitch (Fig. 3, e). When a moosehide or beaver skin is lashed to a stretcher it often secured at the beginning with a lark's head or cow hitch. This knot is also occasionally used in beginning the filling of the center panel of snowshoes. Women also braid a wooden line from yarn, making a four strand sennit braiding which is used to hold mittens around the neck.[9]

281 Skinwork. Two types of skinwork may be distinguished: the skinning and stretching of furs furs designed for commerce, and the skinning, stretching, and tanning of moosehide and caribou hide used in domestic manufactures.

Fur bearing animals, which are trapped or shot, are usually brought into camp before being skinned. In skinning a small animal, such as a squirrel, weasel, mink, or muskrat, the animal is placed on its back, the hind legs outstretched. With a sharp pocket knife, a cut is made at the extremity of one of the rear legs extending through the skin to the muscle. The cut is continued up the leg, across the underneathes of the body and to the pubic or the lower end of the other leg. In making this incision, care must be taken not to cut through the muscle tissue and expose the viscera. The cut passes accurately to the anus and male genitals. After the cut is completed the animal is seized by one of its hind legs and the index finger of the other hand inserted between the skin and muscle tissue at approximately the second joint. Using the finger, the skin is loosened all around the leg at this point. Where this is done the skin is stripped away from the lower portion of the leg and paw. The same process is repeated on the opposite hind leg. The skin is now pulled away from the upper portion of each leg. Upon reaching the body, the finger is inserted under the skin to loosen it from the lower region of the animal's back. A second cut is then made extending in a semicircle from the first horizontal cut posteriorly around the male genitals and anus. Following this incision, the index finger is again inserted between the skin and the back muscle of the animal and worked around the tail. Upon reaching the tail, the finger joins the thumb to pull

[9] See Gusinde and Schmidt, Encyclopedia of Western Ethnol., vol. 3, 1937, Fig. 2.

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in cold weather. The tanning of caribou, goat, and moose hide involved a relatively more complex process to which women devoted considerable time.[3] First the skin needed to be scraped clean of flesh and fat with the aid of a bone fashing tool. Next greater muscular effort had to be applied in wielding the horn scraper with which to free the hide of hair. The woman then rubbed a mixture of brain and water into the skin and left it to soften.[4] Afterwards the hide must be washed and then twisted or wrung out to remove the excess moisture, dried in the sun, and stretched. Thereupon came the labor of softening, accomplished by scraping the spanned white hide with a long handled stone scraper. A second or third brain soaking and scraping followed. Now the skin could be sewn into a tube loosely closed at the end from which it was suspended for an hour or so over a smudge fire kindled with rotten spruce wood. When the inside had been thoroughly smoked the surfaces were reversed and smoking continued for about another hour. The result appeared in a golden yellow skin which the worker suspended in the sun to dry and then fabricated into containers and tailored clothing. The dried whole skin of a large fish (probably burbot) provided material for a bag widely used to store sewing materials.

281

Line ranked as an indispensable requisite in aboriginal times. Material used in line making included sinew, caribou hide taken at various stages of the tanning process, spruce root, whole willow, willow bark, willow root, and grass. Fish skin, willow bast, and spruce wood do not appear to have provided material for cordage. Sinew line originated along the backbone of a caribou or, in emergencies, from the tendons of mountain sheep and goats. A woman scraped the sinews clean of flesh with a knife and hung them overnight to dry. On the following day she flexed and loosened a bunch by grasping the upper and lower ends with the hands and rotating the ends in opposite directions. The process separated the individual strands which could then be stored until needed. Before being used the sinew was moistened by drawing individual strands through the mouth thus rendering them soft and pliable. From caribou hide came rawhide, babiche, and smoked (or tanned) skin line. Rawhide designates a skin from which the hair and flesh have been removed but which has not been treated with the brain mixture. Such skin provided a strong cordage difficult to untie once it had dried and hardened. Ordinary babiche (semi-tanned skin) line generally came from the skin of a bull caribou. Bear skin provided the strongest variety of this type of line while mountain sheep skin yielded a particularly fine babiche highly desirable for filling in front and rear panels of snowshoes. Many often "fine" babiche came from the hide of a cow caribou. Hide to be used in the manufacture of semi-tanned skin cordage had been flashed, cleaned of hair, and softened. It might be dyed to resemble blood if the snare fancied the deep rusty color. Thinly cut babiche was stretched between two trees and left to dry for 24 hours

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B[6]

[3] The fairly detailed descriptions of skin working observed by contemporary Kaska sewing are Honigmann, *Culture and Ethos of Kaska Society* (1949), 56, 76-78, skin working among other Northern Athapaskans is illustrated in Lowie, *Caribou for Chipewyans* (1948), and the same writer's *Pedestal Tales* (1948).

[4] The Tlingit (including the Chilkat) used urine as a tanning solution, while southerly tribes on the coast washed sinew in sea salinity and oil. Swanton, *Contributions to the Ethnology of the Haida*, *Memoirs of the American Museum of Natural History*, *XXVI, Northwest Coast* (1909), 196.

6: Honigmann E-5 (1943-1945)1954 ND12 Nahane ND12
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Dease River

283 in warm weather but for a week during winter. Summer babiche broke easily in comparison to the winter variety. Cold weather drying also rendered the line softer and more flexible. Stretching frames for drying babiche were not generally used, although for hasty drying such line might be wrapped around a snowshoe. From fully tanned and [462] smoked hide came smoked-skin line, of whose manufacture little need be said. Men collected the roots for spruce-root cordage but all subsequent stages of manufacture were carried out by women who scraped the roots with a stone knife and then boiled them for about half an hour. The worker then split each root, smaller ones being split only once but very thick roots four times Occasionally spruce roots were braided. This line kept best when loosely hung up and tended to spoil if wound tightly. When spruce roots became hard and dry, they could be softened with grease but urine was never used for this purpose. Whole willow line, made in emergencies to pack meat, consisted of a long willow branch softened by heating over fire and then twisted until the fibers had been well broken. Willow bark line found a host of uses and yielded material for fish nets. Willow roots, collected by men, were softened through an hour's boiling, split, and then used for cordage. To manufacture grass line women gathered the high sedge growing along lake shores, Bundled into sheaves for transportation back to camp, the material had to be fabricated quickly before it dried. Twisting converted the grass into line that remained useful for only a short period of time. When confronted with the information that the Tahltan had woven goat's wool into blankets our informant (O) opined that the Kaska must have done the same thing.[6] Among the knots commonly applied to the 284 foregoing types of cordage are the running noose, bowline, and overhand. Two ends of babiche were spliced by means of a short band.

412 *Dease River Kaska.* Stone tools constituted the basic equipment in the Dease River 324 area. A flintlike stone as well as obsidian provided materials for blades which were then 281 hafted in handles of horn or spruce and birch wood. Sinew or babiche line secured the hafting. To protect blades men or women manufactured scabbards from smoked caribou hide. The container attached under the outer belt of a person's garments. Although a woman had her own knife its form did not differ from the man's and the objects were [189] designated by a common term. Before beginning to chip stone a man might swing a bullroarer while repeating the song, "thunatin, thunatin." The charm caused his magical power to aid him in the work.

323 Concerning work in clay, we found it impossible to check the testimony of one informant (S) that vessels used to be shaped from this substance and hardened by firing.

321 The caribou or goat's horn adze served as a basic tool for woodworking and stone 401 axes were denied. Men split logs with wooden wedges and used spruce barking tools to assist them in peeling spruce bark.

321 Bone constituted an important material for knife blades, the material being "scraped" 412 to an edge and hafted in a horn or wooden handle. Women used skin fleshers derived from the leg bone of the caribou as well as obsidian scrapers for removing the hair of a hide. Sewing needles of fish bone are said to have been of recent introduction, supplanting bone awls. Unprocessed moose horn provided an ice chisel as well as material for

[6] Teit, *Ten Tribes* (Athabaskan) *West* (1912), 488.

6: Honigmann E-5 (1943-1945)1954 ND12 Nahane ND12
Upper Liard
Dease River
Tsetsaut
Frances Lake

fish spear tines. After being softened by boiling caribou horn could be shaped into spoons with the aid of a stone knife. Several implements utilized teeth. A skin scraper consisted of four beaver teeth set in a wooden handle and secured with babiche line, while a beaver- or porcupine-tooth awl permitted drilling in wood. Men mounted two beaver teeth in a wooden frame for use as a drawknife or chisel. 321 412

The processing of animal skins constituted one of a woman's major tasks. After a preliminary smoking the worker rubbed the skin with a mixture of caribou brain and animal grease. She left the hide to soften for three days and then washed it in water. Afterwards it was kneaded with the fingers and scraped on a frame with a softening stick that carried a stone blade. Following another soaking in the brain mixture the process was repeated one or more times before smoking. Use of urine in tanning was not admitted. 281

Animal hides at various stages of processing, along with various vegetable products, provided materials for cordage. Types of line included sinew, rawhide, semi-tanned hide, smoked (tanned) skin, spruce root, twisted grass, and willow root. Although in a somewhat different category, the wristlets made by twisting eider-duck feathers may also be mentioned here. Fish-skin line and spruce-wood cordage are explicitly denied by contemporary informants. Strong rawhide came from bearskin and, like caribou rawhide, served for packing. Caribou and beaver (?) pelts provided babiche, while in an emergency strong packing line that remained useful for relatively limited periods could be fabricated from willow bark.[4] Grass-woven baskets had been heard about by a Dease River informant. They were manufactured in summer by women as receptacles for storing food and other materials. Grass mats met with no recognition. 283 [287] [285]

Tsetsaut. The easterly Kaska prepared a needle with an eye from a marten bone. Although not certain of the kind of bone used, the informant would not assent to the suggestion that it might have been a penis bone. 321 412

Frances Lake Kaska. A traveler's mention of "ropes" of goat's hair among the Frances Lake Indians is evidence of the processing of goat's wool and its probable use in weaving.[5] 286

FOOD—ITS COLLECTION, PREPARATION, AND EATING

Upper Liard Kaska. The aboriginal Kaska community took many of its cues from the seasons, whose perpetually recurring cycle accompanied notable changes in the habits and condition of the animals on which the people depended. In late summer, when game had fattened, hunters and their families moved into the mountains in pursuit of the goat, sheep, caribou, gopher, and ground hog. People thought of the long, lean seasons of winter as the women busied themselves drying meat and cacheing it for future consumption. Meanwhile men smelted snowshoes, toboggans, and sewing sleeves. When the snow became deep and the severe cold began to set in the families gathered together around a fish lake where, a little like some of the other animals, they "hiber- 221

[4] An informant reported that among the Bear Lake Sekani line was cut from rawhide, semi-tanned skin, and smoked skin. Demonstration by another informant from this group revealed use of the bowline for splicing two ends of babiche.

[5] Hunter, *Pioneer Life*, Fisher (1966), 75.

6: Honigmann E-5 (1943-1945)1954 ND12 Nahane ND12
Upper Liard

heavier pole was employed. In winter, brush placed under the point where a fall log 224
rested on the snow prevented this part from sinking. The pen behind the trigger stick was also provided with spruce boughs. Beaver deadfalls, erected on land behind a beaver house, were of the platform variety, the platform being secured to the samson post with spruce-root line and weighted down with rocks or earth—in winter only rocks. Ground-hog deadfalls also followed the platform pattern, the 14-inch samson post consisting of a bent alder limb or crooked spruce root. Nets of semi-tanned skin line [286]
spread under the ice also helped to catch beaver. After the net had been set the trapper broke down the animals' house, causing the inhabitants to flee toward the net. The trapped beaver were dispatched after the net was raised. The suggestion that pitfalls may have been used along the Upper Liard comes only from their mention in folktales.[9]

For hunting the Indian armed himself with the bow, arrows, spear, gaff hook, sling, or club. Black-birch wood provided the favorite material for bows and, as in toboggan #11
construction, the wood that grew nearest the outside of the tree was thought to be best 322
suited for bending. A small amount of (inner?) bark was often left on the bow wood in order to increase its resiliency. The size of a bow varied; a boy's reached from the ground to just above the stomach, while a man's extended to his forehead. Fitted to such large bows by means of a lashing that passed through two holes drilled in the stock, was a guard about the size of a violin bridge. It prevented the bowstring from snapping back against the fingers. A backing of tanned skin line sometimes appeared on each side of the guard. Occasionally bows were decorated with a "peppermint stick" design applied [321]
by masking the stick with widely spaced strips of spruce bark and then drying the wood over a fire. When dry the bark was pulled free, leaving an attractive black and white striped effect. Double-strand, twisted, cold-weather dried babiche supplied the bow- [283]
string. The informant objected to employing sinew, claiming that this substance would be too weak. One end of the line was knotted to an end of the bow stock, while an eye on the free end slipped into a notch at the stock's opposite end.

A light wood, such as spruce, ranked highest for arrows. A stick cut to suitable size was heated and then straightened by being worked back and forth in a forked stick split a short distance below the fork. A nock cut on the rear of the shaft fitted against the bowstring. The size of an arrow depended in part on its intended function; for game birds 24 inches was a standard size while 3 feet constituted the size of a shaft suitable for big game hunting. Points also varied according to function. Detachable points of bone barbed on only one side[10] were secured to shafts by means of line. Double bone points, the barbs facing in opposite directions, served to kill spruce hens and grouse. Stone-tipped shafts fitted with a quarter-inch deep notch brought down rabbits and other small game. Finally, detachable stone points that remained in the animal after the shaft was withdrawn or broken off were reserved for big game. To shoot fish a detachable flint point was provided and attached to the shaft with two feet of tanned skin line.

[9] Pitfalls seem to have been absent among the Fort Nelson Slave. Honigmann, *Ethnography and Acculturation of the Fort Nelson Slave* (1946), 37.

[10] Cf., Osgood, *Ingalik Material Culture* (1940), 303, Illustration 4.

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322 ever, does not grow in the Cassiar.[9] Aboriginally wood for snowshoe frames was bent
481 after first being carefully chewed with the teeth. The forward overlap of the two parts of the frame extended for about five inches on a trail snowshoe and somewhat more on the shorter hunting variety. Two or three cross pieces resulted in three or four panels. A rounded snowshoe, it is claimed, did not sink into the snow as much in front as the pointed variety nor would it pick up as much snow.[10] While known aboriginally, the pointed snowshoe became more common following European contact.

A craftsman "tailored" the size of snowshoes to their intended function. If designed for breaking trail in front of a toboggan or for following an already broken trail the average size person could get along with snowshoes about three and a half feet long. Hunting snowshoes, designed for remaining near the surface of deep, loosely packed snow, almost equalled the height of the prospective wearer, the width being somewhat
[483] adjusted to the user's relative weight. Two varieties of babiche line served for filling, first, a heavy cordage that was woven into the center panel supporting the direct weight of the wearer, and second, a fine line for the front and rear panels. Both men and women
[413] knew how to fill snowshoes but the process generally occupied the latter. In applying the fine filling the artisan needed a bone snowshoe needle. In one type of needle the blunt end of the instrument was made concave in order to push through the line. The other end formed a slight hook, useful for pulling the line upward through filling already laid down. Another type of needle, made of wood or bone, contained a center eye in which to anchor the filling cord. Prior to lacing, loops of cordage had to be provided around the inside of the frame, to which the webbing of the front and rear panels could be anchored. Holes for these loops are said sometimes to have been drilled with a piece of hardwood heated to a glow and then pressed against the appropriate point of the frame. Several reheatings of the "awl" were necessary to complete the task. Beaver- and porcupine-tooth awls served as much more efficient drills.

481 The following patterns of snowshoe lacing are derived from an analysis of contem-
284 porary snowshoes. No radical differences from aboriginal practice could be discovered. When starting to fill a snowshoe the worker usually turned to the front panel, the line beginning at the right hand side (Fig. 4, upper LEFT, facing front end of snowshoe). One end of the line passed through the first framework loop (17) where it was tied with a double overhand knot. The other end was carried back to the crosspiece. Bending over the top of the strut (18) it came out from below and traveled up to the toe where it bent over the babiche which here hold the frame together (9). (Aboriginally the Lowhaw type shoes must have been provided with loops going completely around the front of the panel.) Coming out from below, the line twisted against its own part and

[9] Rocky Mountain maple "is especially used in making snowshoes and bows" among the Sekelme Thompson Indians. Teit, *Ethnobotany of the Thompson Indians of British Columbia* (1900), 400, 500; Boas, *Culture Element Distributions: XXIII, Plateau* (1942), 158.

[10] At Fort Nelson an informant expressed an opposite preference when he said that rounded front snowshoes were of little use "in this country, but in the North, where the snow is packed hard, they can be used." (Honigmann, *Ethnography and Acculturation of the Fort Nelson Slave* (1946), 41.) Needless to say there is no difference in the quality of the snow between the Fort Nelson and Cassiar areas. The opinions represent diverse attitudes toward a bygone culture pattern.